Canada Thistle

The Threat of the Creeping Root

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ABSTRACT

This paper is to provide information about my experience helping Elaine Cole and Nora in the learning garden. My task was to pull up the Canada thistle that has become a nuisance to the Learning Gardens space. I will also provide background about Canada thistle, and ways to combat it. Finally I will talk about the Canada thistle and how it relates to the space that the Organic Gardening class occupies.

INRODUCTION

Canada thistle is considered a weed in many gardens, grass lands and now is a concern for our Native Forest. It is invasive and extremely hard to control, but not impossible if you are willing to be vigilant in eradicating this noxious weed. I will describe how to identify Canada thistle, the family in which it belongs to. How it can overtake the garden, its root system and How to control it. I will then talk about my work in the learning garden and how it pertains to the Organic garden plots for class.

DESCRIPTION

While most know this noxious weed as Canadian Thistle the correct common name is Canada thistle, the Latin name is Cirsium arvense (L.) Scop. and it is part of the Sunflower Family (Asteraceae) (1). Canada thistle is a perennial that grows between 11/2 to 4 feet in height, the lanced shape leaves are prickly, irregularly lobed with tiny, toothed margins (1). Flowers grow in umbrella shaped clusters whose colors range from white to varies shades of purple and appear from June through October (1). The singled seed fruit that is produced is called achenes and are 1-11/2 inches long and have a feathery structure attached to the seed base. (1) the rootstock can be massive and creeps horizontally up to fifteen feet plus as well as six to fifteen feet vertically down (2) a number of buds can produce form just one rootstock.

THE ECOLOGICAL DAMAGE OF A NOXIOUS WEED

The dictionary defines a noxious weed as "a plant considered harmful to animals or the environment." Once Canada thistle is introduces it will crowd out and kill native plants, when this happens it affects the biodiversity of the area (1). This causes a decrease in plant and animal species. It does this by shading out newer plants and due to their extreme roots system it leaves virtually no room in the soil for other plants to root (1). They may also release toxins that are poisonous to other plants (1). Canada thistle has been recognized as a major agricultural pest, costing millions in crop loss (1). The seeds are dispersed by wind, or carried on animals, people, and machinery or down streams. One flowering shoot can produce a thousand to fifteen hundred seeds (2); these seeds can live in the soil for twenty or more years (3). The hidden danger is underground where its fibrous taproot creates an integrated system of creeping roots (1). The plants sprout mid to late spring (2) the shoots then are able to spread out, sprouting many times though out the growing season(1). A piece of the root, as small as an inch in length can create a new plant (1). They also have enough energy stored in them that they can survive 100 days without nutrients from photosynthesis (2). Shoots can emerge from these pieces in as little as fifteen days (2). This is caused from tilling or pulling up the plant and not getting the whole root leaving fragments behind in the soil. One plant can colonize an area three to six feet in diameter in one or two years (2). The plants are either male or female, growing in bunches of the same sex. Pollinator's can pollinate a plant that is as far as 200 feet away (2).

DAMAGE CONTROL

With a bit of tenacious commitment you can greatly reduce and rid your area of Canada thistle. Be aware that this is going to take some time and effort on your part but it can be done and without chemicals. Some of the ways are mowing, and pulling up by hand, making sure that

you get as much of the weed s roots as you can to prevent new shoots. At first when you do this it will actually stimulate new grow from buds that are underground (3). These can form new shoots for a year or more (3). Also you can do control burns (1) as well as planting a variety of plant species that can block the light from the thistle. The thistle grows well where there is a lot of open space, so confining the space will weaken the plant. Shading provides a way to control the growth during growing season (3). Crops such as Alfalfa and grasses can work to combat the growth of Canada thistle (2). Due to the perennial nature the whole plant needs to be killed in order for it not come back. The goal to pulling the plant or mowing is that eventually you will exhaust the root and it will die (1) With the burning method you should wait until fall in order not to stimulate growth (1).the goal to killing Canada Thistle without the use of pesticides is to continue to stress the plant out by constant pulling or cutting, and not allowing it to go to seed. This will exhaust the plants root system causing it to collapse; this may take several years (2).

THE LEARNING GARDEN AND ME

I was very excited to help Elaine out, there were so many things that she needed to get done and I could not wait to help in these adventures tackling one at a time. The main priority was the Canada thistle and I thought no problem, I have certain weeds in my yard that I have almost eradicated. Some quicker than others, but I thought no problem I have ten hours of service learning and when I am done the weeds will be gone. Little did I know of the power of survival that this plant had? I would spend anywhere from twenty to forty minutes a day before and after class pulling Canada thistle. I was proud of my job, I found a weeding tool for free on the curb and I went out and for the first time bought gardening gloves for the occasion. I think it was week four in the garden when I came back from a weekend where we finally had rain and to my disappointment there they were tiny thistle rosettes everywhere. The feeling of defeat set in,

all that work and for what I thought I got most of the root, where were these coming from? I told Elaine that I would help with the most urgent item and move on, but here they were again everywhere. As long as I had class I was not going to let this weed win, so I continued to pull them. I have noticed that the new ones are easier to pull out and I have been doing my best to go as deep as I can, but really that is all I can do. I feel some relief knowing that they probably will not flower this year and that there will be someone hopefully who will take over from where I have left off. I feel that by making it weak is the only way without the use of chemicals to exhaust the massive root system that is growing under or feet. I think that the work we did in the garden and me in the Blueberry patches at first might have stimulated there growth, but continual pulling, maintenance and planting cover crops grasses in the fall will help in weakening the system so that someday this weed will be a thing of the past in garden. Maybe this paper will help others in knowing exactly what they are dealing with.

CONCLUSION

This is a battle, but I am hopeful that with the right amount of maintenance and dedication Canada thistle can be part of the Learning Gardens past and not part of their future. The main goal here is to exhaust the root system and prevent it from flowering. We can do this by Growing cover crops and continuous cutting of the stocks though out the season. You also want to make sure to remove any of the roots that are showing remember that a piece as small as ½ inch has enough life in it to support a new plant.

ACKNOWLEDGEMENTS

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